SDCS-ER-76-105

SPECIAL DATA COLLECTION SYSTEM EVENT REPORT EASTERN KAZAKH, SSR, 09 JUNE 1976

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SDCS EVENT REPORT NO. 105

Eastern Kazakh SSR 09 June 1976

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival	Origin Time	Lat.	Long.	m_b	M_s
NORSAR	03:10:20.8	03:02:48.0	50.0N	081.0E	5.3	N/A
Hagfors	03:10:11.2	03:03:06.0	51.0N	078.0E	5.9	N/A

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

03:02:59.7	50.1N	078.9E	5.2	N/A

The programs used for LASA and NORSAR data recovery, previously listed as undergoing modifications, are now usable. Beginning with this report, data from these two arrays, both short period and long period, will be included whenever possible.

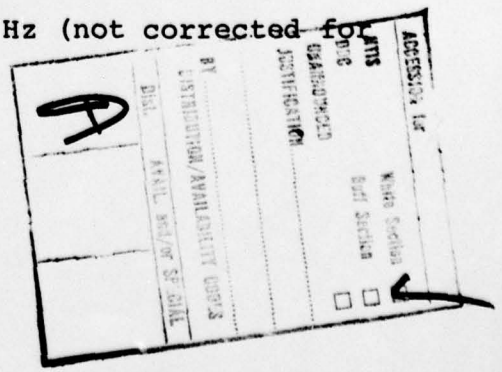
All SDCS stations were operational during this period.

There is an apparent 24-second timing error at RK-ON. The cause is presently unknown. Both systems, analog and digital, agree; therefore the data is not used in the hypocenter determination.

Short-period signals associated with this event were recorded at all SDCS stations, LASA and NORSAR. All SDCS data were retrieved from the digital field tapes and horizontal channels were rotated. NORSAR short-period array trace presentations were obtained from their event tape. Analysis data were taken from their bulletin. LASA short-period array data were obtained from the new detection processing system.

No long-period signals for this event were received at the SDCS stations. Long-period array data for LASA and NORSAR were unobtainable.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response).



STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SECS	ELEVATION METERS	INSTRUMENTATION SHORT-PERIOD	LONG PERIOD
CPSO	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32 58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	KS36000	KS36000
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be $16^{\circ} \pm 5^{\circ}$ based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

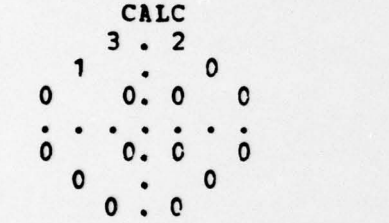
HYPOCENTER DETERMINATION

INPUT FOR EVENT 9 JUN 76
03:03:00.0 50.000N 80.000E 0KM.

STA.	ARRIVAL	RESIDUALS CALC	RESIDUALS REST	DIST. REST	AZ. REST
NAO	03 10 20.8	-17.2	-0.2	38.3	312.9
WH2YK	03 13 48.2	-15.5	-0.2	66.3	17.4
RK-ON*	03 14 41.9	-38.1 *	-24.0 *	79.3	355.2
HN-ME	03 15 10.2	-13.6	0.7	79.9	337.3
LAO	03 15 28.8	-14.3	0.3	83.5	3.5
FN-WV	03 15 59.0	-14.5	0.1	89.7	343.2
CPSO	03 16 16.3	-15.3	-0.7	93.6	347.4

67 HERRIN TRAVEL TIME TABLES

NO	ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
CONVERGENCE ON CALC RUN							
	03:02:53.1	49.031N	79.310E	-49. CALC	1.3	16	6
	03:02:59.7	50.056N	78.879E	0. REST	0.5	2	6



CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 0.93
MAJOR 170.0KM. MINOR 41.3KM. AZ= 180 AREA= 22055 SQ.KM. REST

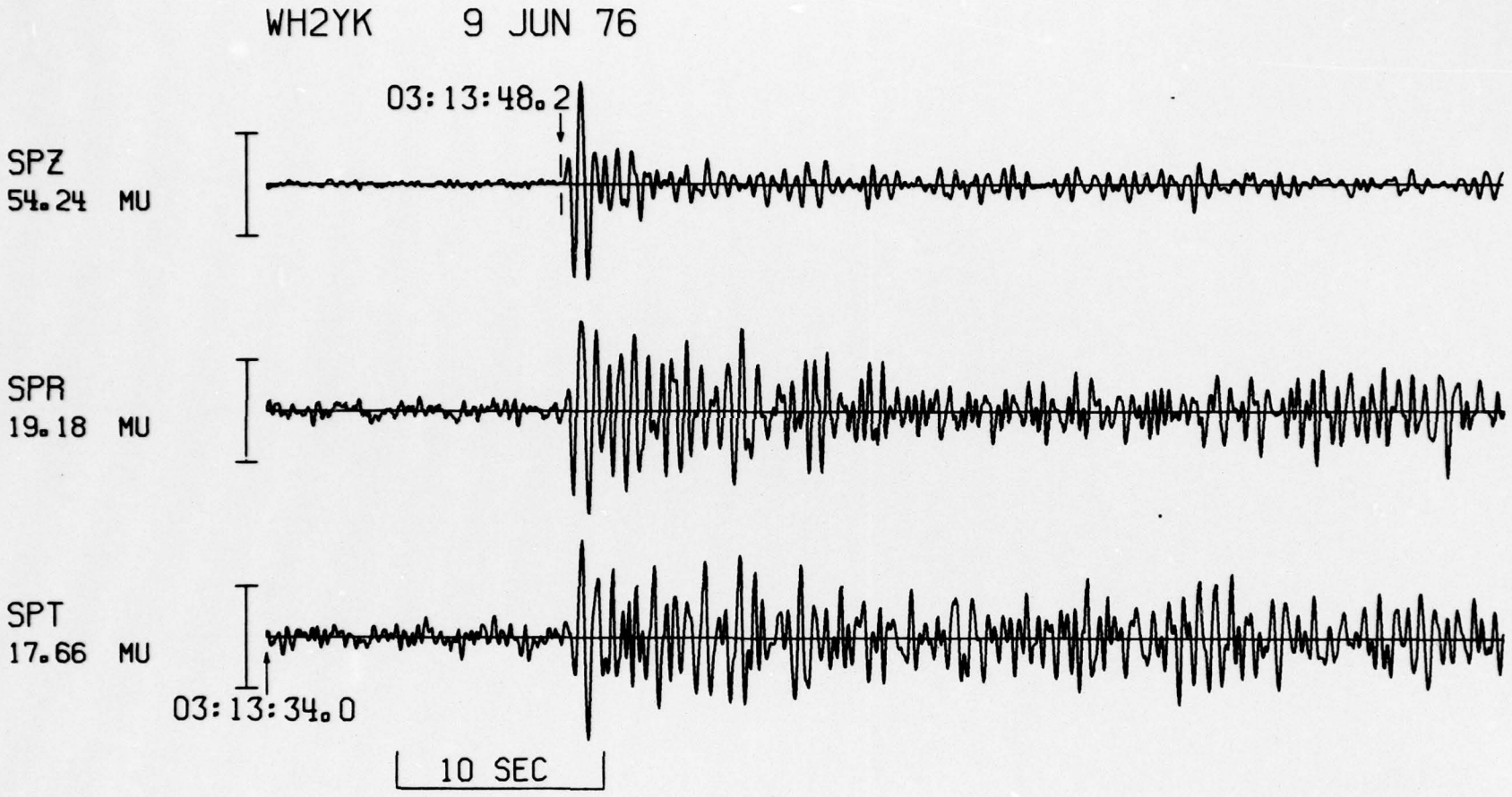
DATA SUMMARY

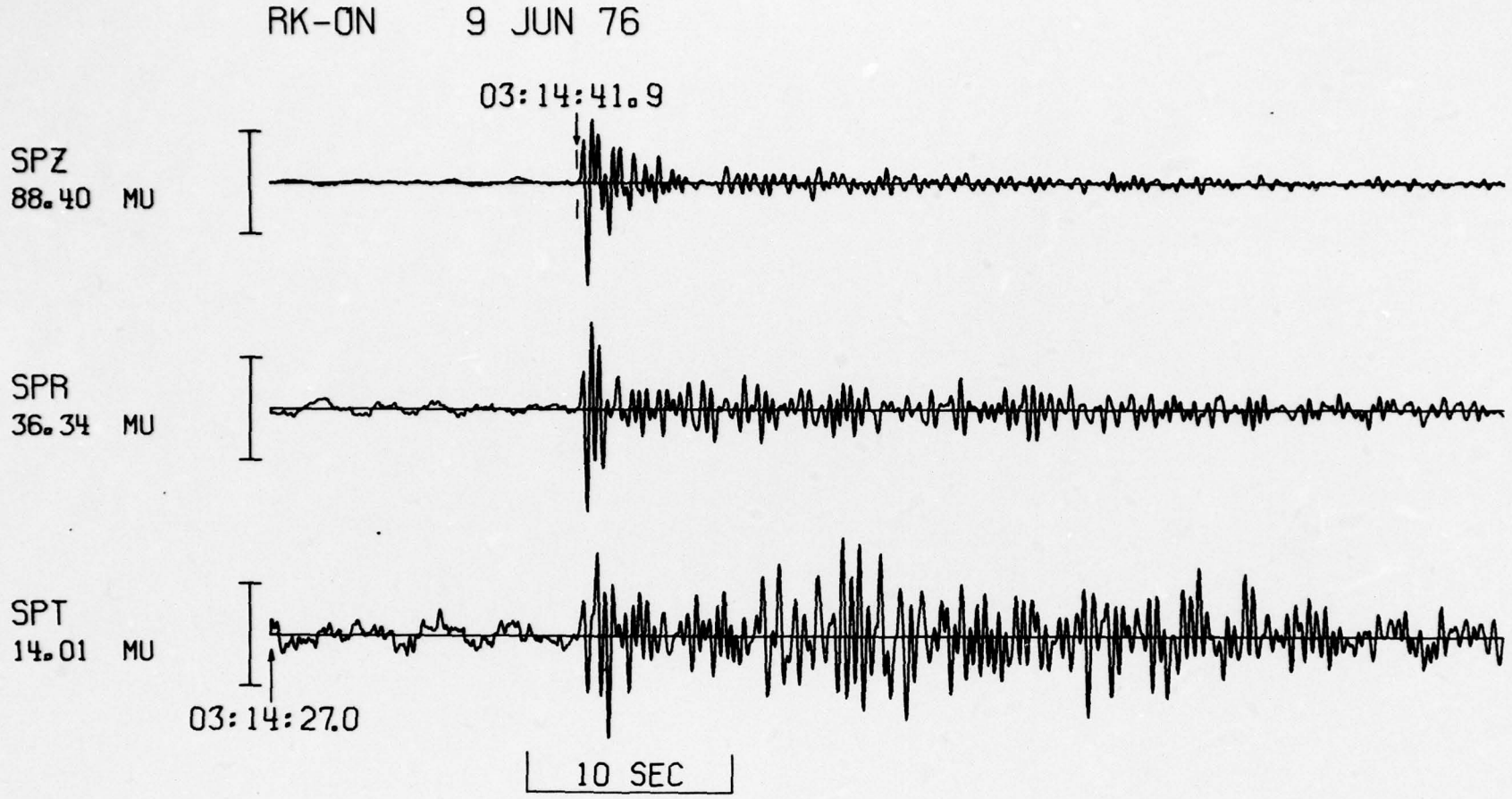
INPUT FOR EVENT 9 JUN 76
03:03:00.0 50.000N 80.000E 0KM.

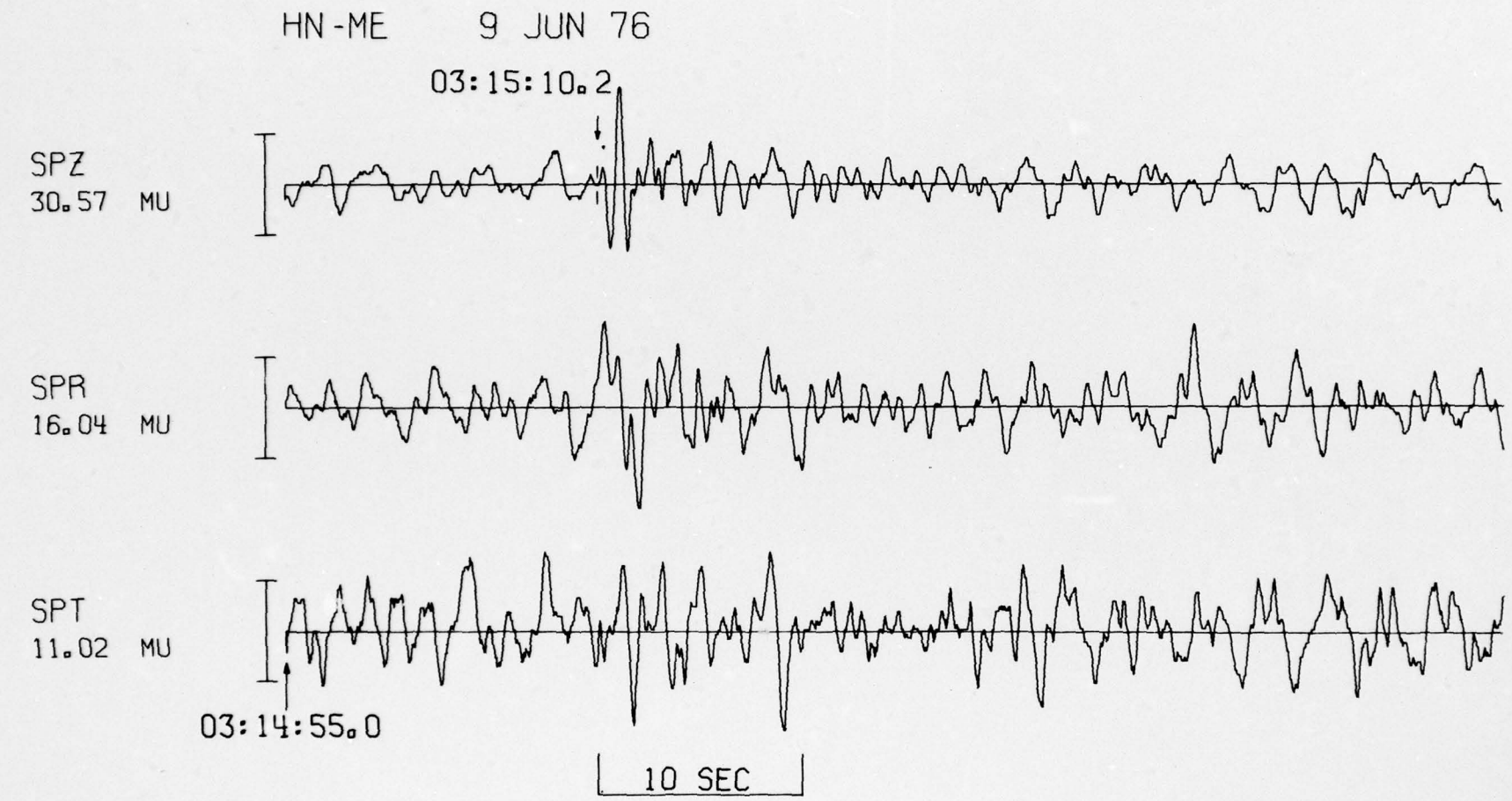
STA.	PHASE	ARRIVAL TIME	INST	PER	A/T	MAGNITUDE MB	MS	DIR	DIST
NAO	EP	03 10 20.8	AB	0.7	107.	5.20			38.3
WH2YK	EP	03 13 48.2	SPZ	0.7	69.	5.54			66.3
RK-ON*	EP	03 14 41.9	SPZ	0.4	88.	5.42			79.3
HN-ME	EP	03 15 10.2	SPZ	0.8	37.	4.97			79.9
LAO	EP	03 15 28.8	SAB	0.8	25.	5.10			83.5
FN-WV	EP	03 15 59.0	SPZ	0.7	13.	4.81			89.7
CPSO	EP	03 16 16.3	SPZ	0.5	33.	5.36			93.6

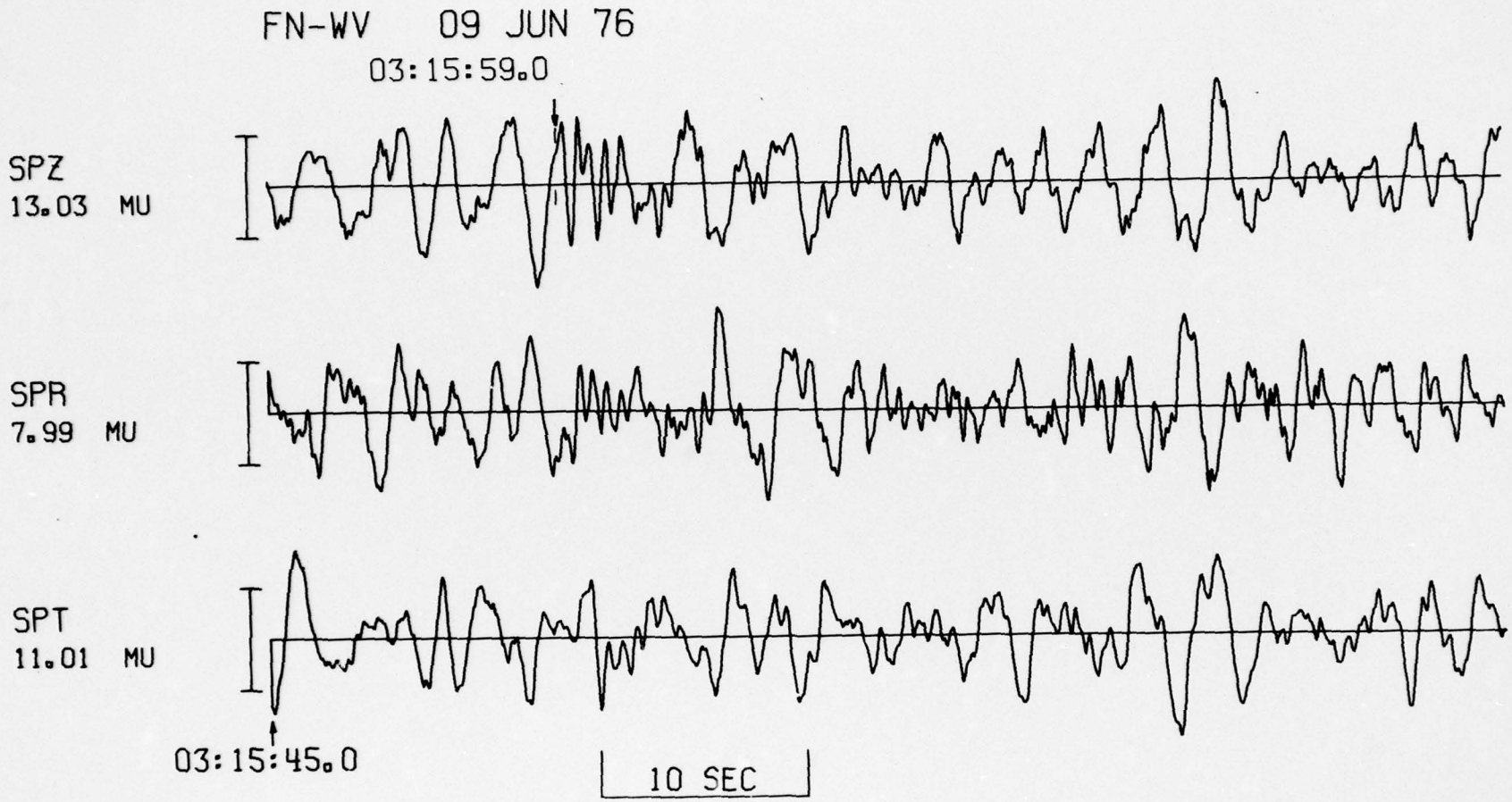
ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA
03:02:59.7	50.056N	78.879E	0. REST	5.16	0.26	6

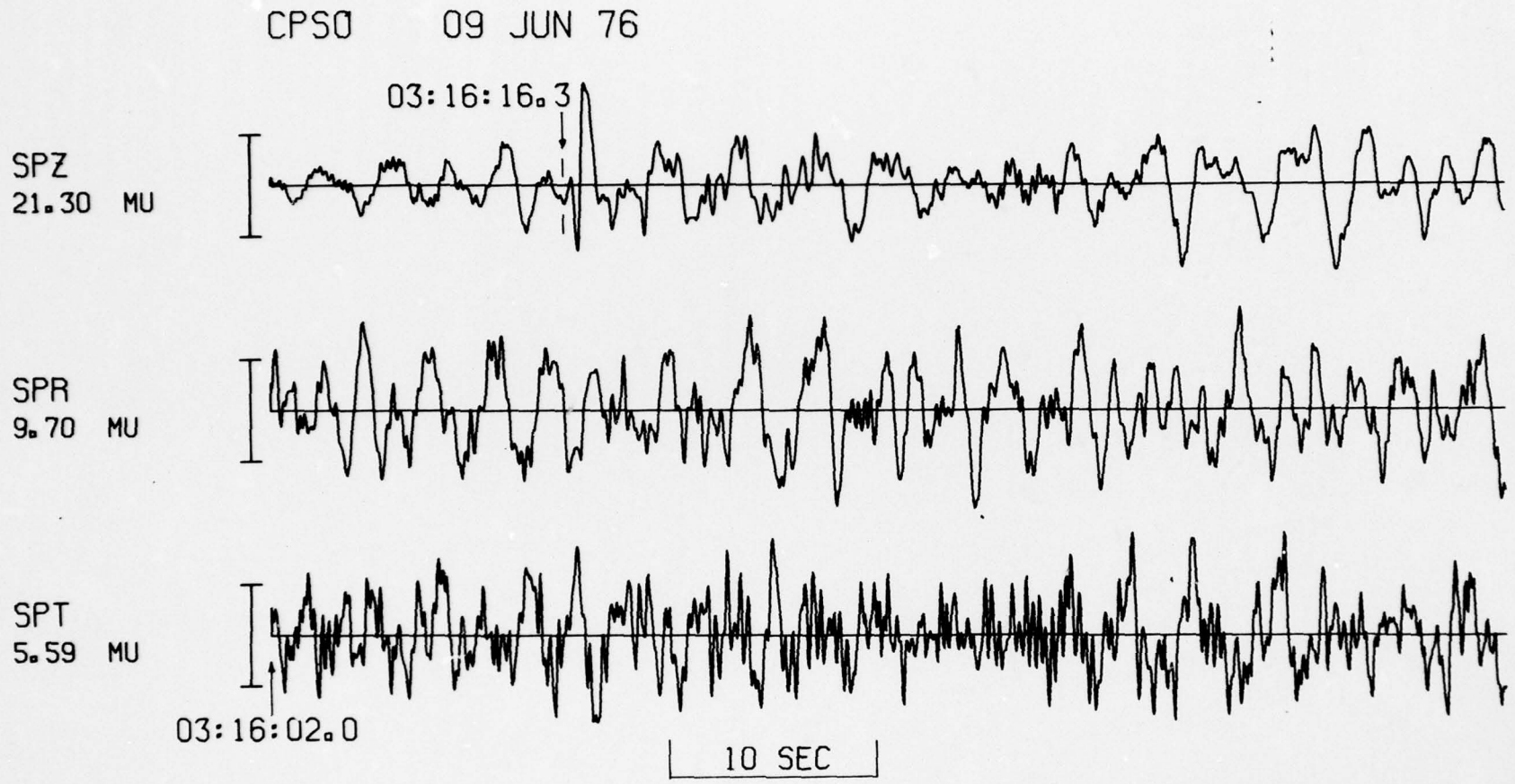
*Apparent, unexplained 24 second timing error at RK-ON

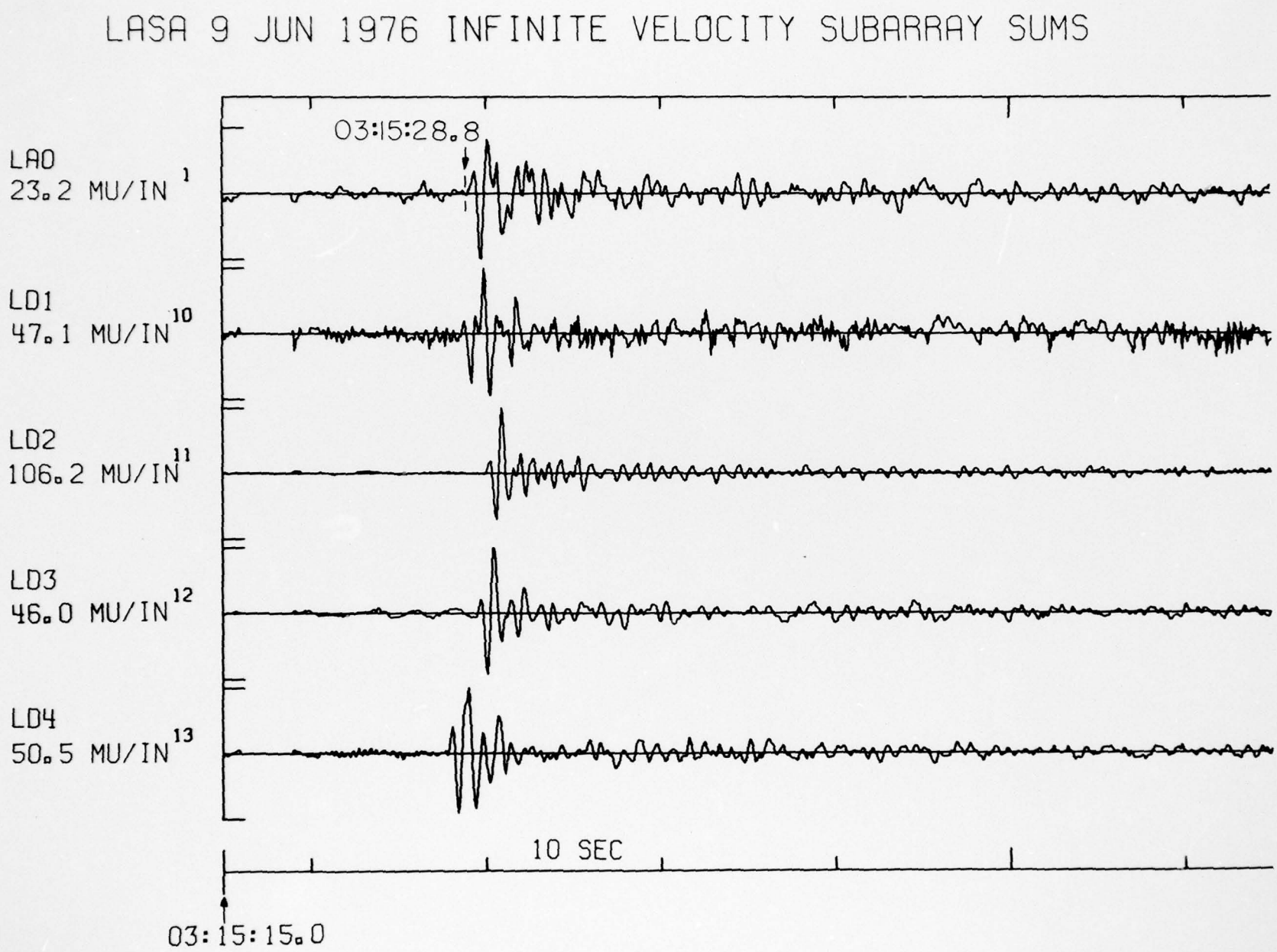

WH2YK 9 JUN 76
03:13:48.2
SPZ
54.24 MU
SPR
19.18 MU
SPT
17.66 MU
03:13:34.0
10 SEC


RK-ON 9 JUN 76
03:14:41.9
SPZ
88.40 MU
SPR
36.34 MU
SPT
14.01 MU
03:14:27.0
10 SEC

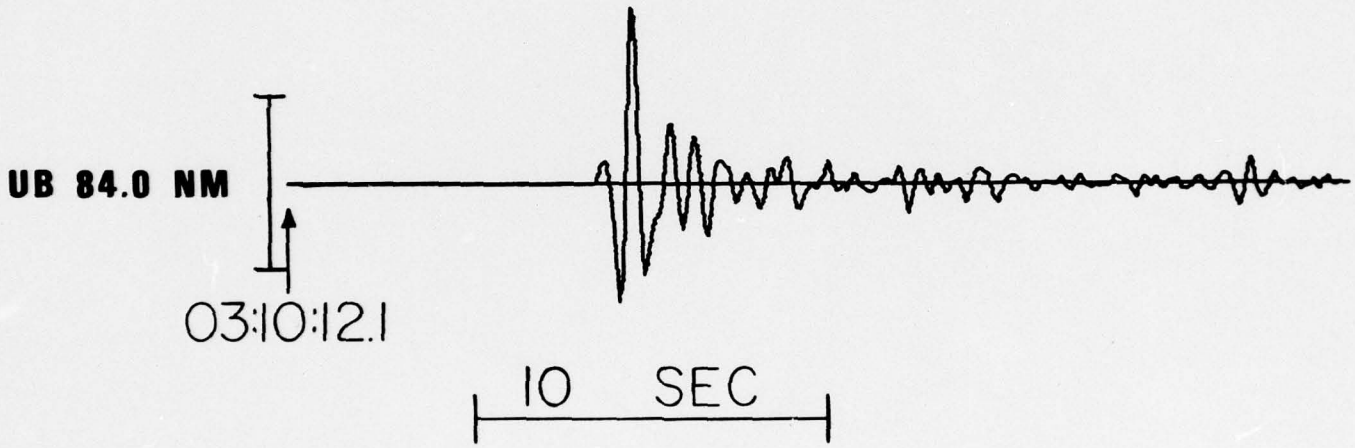

HN-ME 9 JUN 76
03:15:10.2
SPZ
30.57 MU
SPR
16.04 MU
SPT
11.02 MU
03:14:55.0
10 SEC

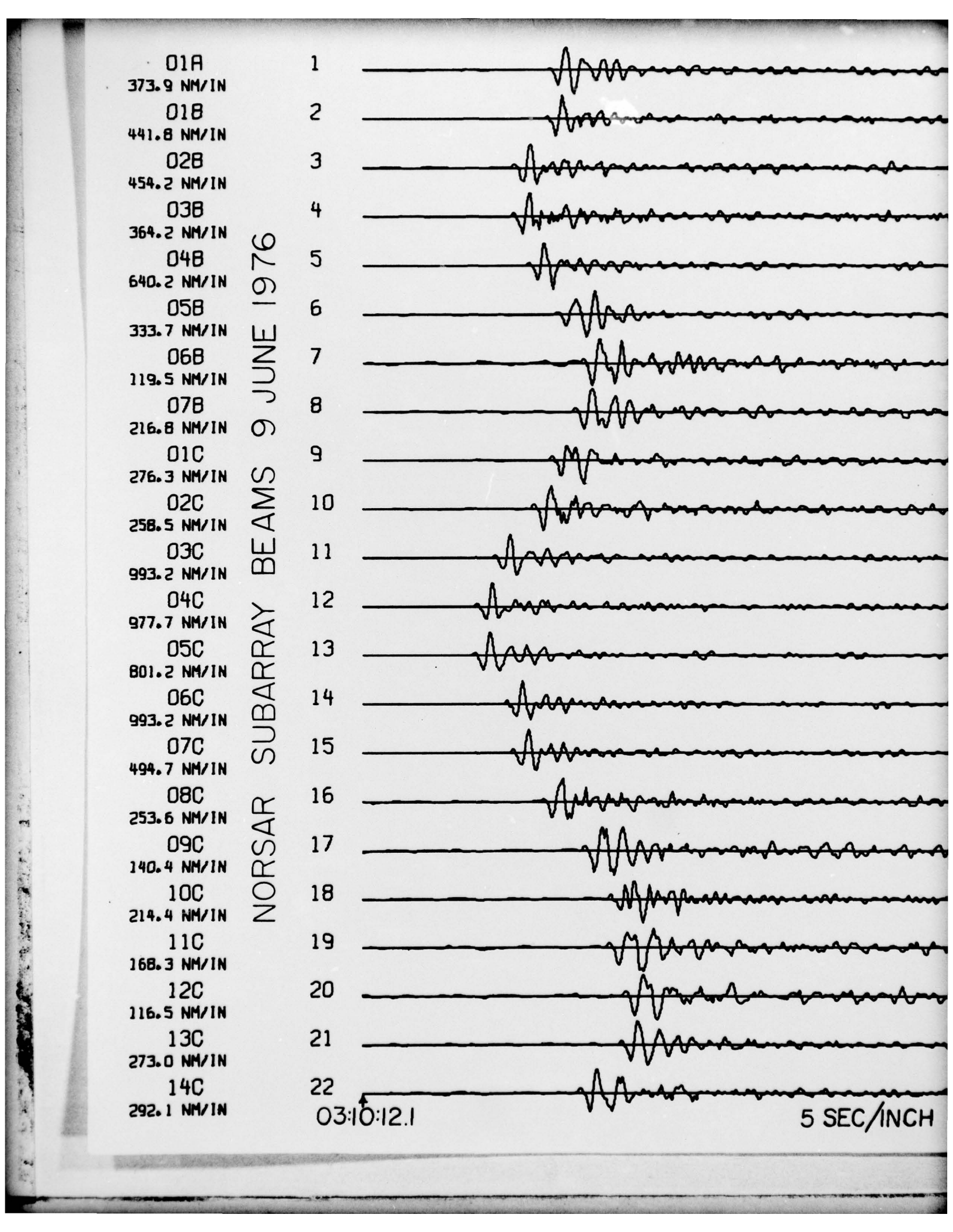

FN-WV 09 JUN 76
03:15:59.0
SPZ
13.03 MU
SPR
7.99 MU
SPT
11.01 MU
03:15:45.0
10 SEC


CPSO 09 JUN 76
03:16:16.3
SPZ
21.30 MU
SPR
9.70 MU
SPT
5.59 MU
03:16:02.0
10 SEC


LASA 9 JUN 1976 INFINITE VELOCITY SUBARRAY SUMS
03:15:28.8
LA0
23.2 MU/IN 1
LD1
47.1 MU/IN 10
LD2
106.2 MU/IN 11
LD3
46.0 MU/IN 12
LD4
50.5 MU/IN 13
10 SEC
03:15:15.0

NORSAR ARRAY BEAM 9 JUNE 1976




01A
373.9 NM/IN
01B
441.8 NM/IN
02B
454.2 NM/IN
03B
364.2 NM/IN
04B
640.2 NM/IN
05B
333.7 NM/IN
06B
119.5 NM/IN
07B
216.8 NM/IN
01C
276.3 NM/IN
02C
258.5 NM/IN
03C
993.2 NM/IN
04C
977.7 NM/IN
05C
801.2 NM/IN
06C
993.2 NM/IN
07C
494.7 NM/IN
08C
253.6 NM/IN
09C
140.4 NM/IN
10C
214.4 NM/IN
11C
168.3 NM/IN
12C
116.5 NM/IN
13C
273.0 NM/IN
14C
292.1 NM/IN
NORSAR SUBARRAY BEAMS 9 JUNE 1976
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